

Cardiovascular Disease
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What is cardiovascular disease?

Cardiovascular disease refers to the impairment of the heart and blood vessels. The four most common types of cardiovascular disease are high blood pressure, coronary heart disease (which includes heart attack and angina pectoris or chest pain), stroke and rheumatic fever/rheumatic heart disease.⁴⁴

A *stroke* can be thought of as a "brain attack"; it is a form of cerebrovascular disease that affects the brain's arteries. It occurs when an artery bringing oxygen- and nutrient-rich blood to the brain becomes clogged or ruptures. The brain needs a constant flow of blood to keep it working properly. When a stroke occurs, the blood supply is disrupted, and brain cells are starved of oxygen, causing cell death in the immediate area. This area of dead cells is called an infarct. These cells usually die within minutes to a few hours after being deprived of oxygen.⁴⁵

Why is cardiovascular disease an important health issue for Detroiters?

Though it includes a range of diseases involving the circulatory system and major organs, the primary components of cardiovascular disease are heart disease and stroke. They are the first and third leading causes of death in the United States, accounting for more than 40% of all deaths. About 950,000 Americans die of cardiovascular disease each year. Although cardiovascular disease is often thought to primarily affect men and older people, it is a major killer of women and people in the prime of life. More than half of all cardiovascular disease deaths each year occur among women.

Three health-related behaviors practiced by people every day contribute markedly to cardiovascular disease:

- *Tobacco use.* Smokers have twice the risk for heart attack of nonsmokers. Nearly one-fifth of all deaths from cardiovascular disease, or about 190,000 deaths a year, are smoking-related. Every day, more than 3,000 young people become daily smokers.
- *Lack of physical activity.* People who are sedentary have twice the risk for heart disease of those who are active. More than half of U. S. adults do not achieve recommended levels of physical activity.
- *Poor eating habits.* Only 18% of women and 20% of men report eating five servings of fruits and vegetables each day. Almost 60% of U.S. adults are overweight or obese. People who are overweight have a higher risk for cardiovascular disease.

Modifying these behaviors is critical both for preventing and for controlling cardiovascular disease. Other steps that adults who have cardiovascular disease should take to reduce their risk of death and disability include adhering to treatment for high blood pressure and cholesterol, learning the symptoms of heart attack and stroke, and seeking help as soon as these symptoms arise.⁴⁶

In addition to being the leading cause of death nationwide, heart disease was also the leading cause of death in Michigan, and Detroit in 2000. Stroke was the third leading cause of death. Though some people inherit a predisposition to developing cardiovascular disease, it is preventable. By enhancing community awareness of risks, and developing and implementing effective prevention strategies, Detroiters may mitigate the impact cardiovascular disease is having on the health status of the community. Certainly, for those who already have cardiovascular disease, knowledge, aggressive management and proper treatment can prevent deaths.

Blood pressure is the force of blood pushing against blood vessel walls. "High blood pressure", also known as hypertension, directly increases the risk of coronary heart disease (which leads to heart attack) and stroke, especially along with other risk factors. It is particularly common in people who are Black, middle-aged, elderly, obese or heavy drinkers.⁴⁷

Cardiovascular Disease in Detroit

According to the American Heart Association, mortality figures are the most accurate data available for assessing the impact of cardiovascular disease and stroke. Though other statistics, such as prevalence and incidence, are estimated, mortality figures are compiled from death certificates.⁴⁸

As shown in Figure 26, heart disease deaths for Detroit have consistently been higher than those for the entire state, though both declined throughout the 1990s. By the end

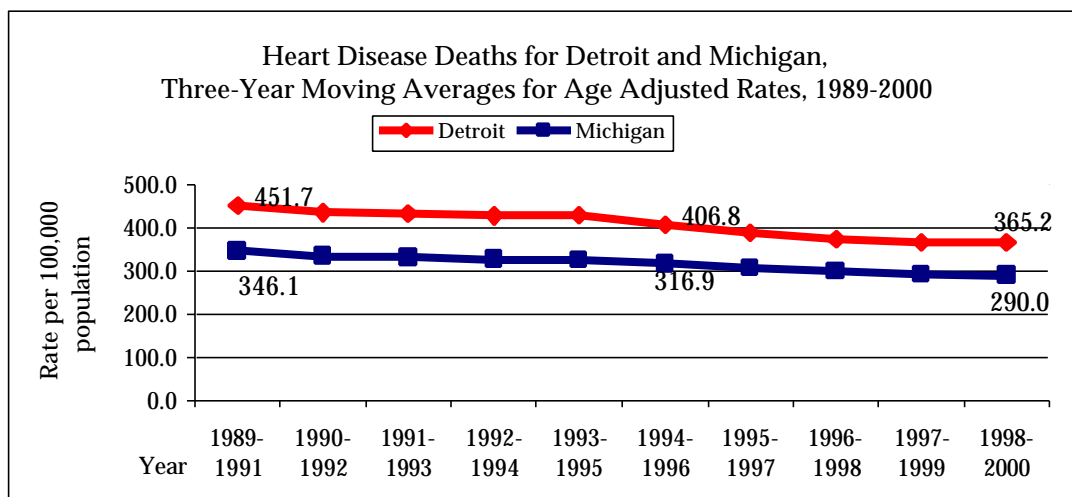


Figure 26

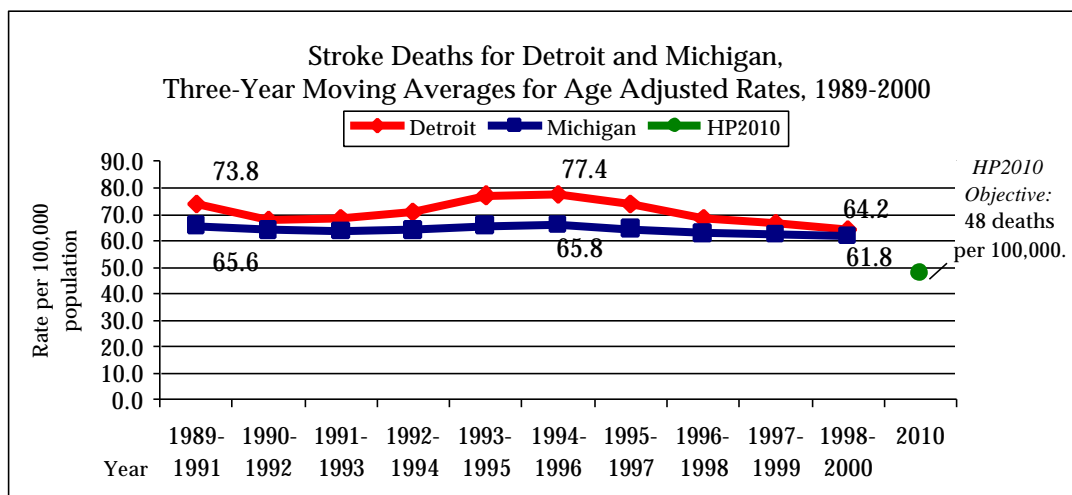


Figure 27

of the decade, deaths in Detroit (365.2 per 100,000 residents) were still higher than they were for Michigan from 1989 -1991 (346.1 per 100,000 residents).

According to the three-year moving averages shown in Figure 27, Detroit experienced a slight decline in stroke deaths in the early 1990s and increases in the middle of the decade. Stroke deaths for the state were relatively stable, showing slight increases in the mid-1990s. By 1998-2000, stroke deaths for Detroit had declined considerably (64.2 per 100,000 population) and the state rate had declined moderately (61.8 per 100,000). Detroit rates have been above the state as a whole, but decreased significantly.

A consideration of deaths alone understates the burden of cardiovascular disease. About 61 million people in the United States (almost one-fourth of the population) live with cardiovascular disease. Heart disease is a leading cause of disability among working adults. Stroke accounts for disability among more than 1 million people in the United States. Almost 6 million hospitalizations each year are due to cardiovascular disease.

Cardiovascular diagnoses are a major cause of preventable hospitalizations in Michigan.^{****} Congestive Heart Failure (CHF), a condition in which the heart can't pump enough blood to the body's other organs, is one of the leading diagnoses for preventable hospitalizations in Michigan and for the City of Detroit.^{49,50} There was a total of 235,540 preventable hospitalizations for Michigan in 1999. There were 40,003 for the City of Detroit. In 1999, 16.6% of Michigan's and 16.8% of Detroit's preventable hospitalizations were due to CHF.

When the heart's muscle does not get as much blood as it needs, a person may experience pain or discomfort in the chest due to coronary heart disease, which is known as Angina.⁵¹ Angina is and the ninth leading diagnosis for preventable hospitalizations for the state of Michigan (2.8%) the tenth in the city (2.3%).⁵⁹

HP2010 has a number of objectives relative to cardiovascular disease. One objective is to reduce coronary heart disease deaths to 166 per 100,000 persons in the United States. From 1988 to 1994, 28% of adults aged 20 and over in the United States had high blood pressure. By 2010, the *HP2010* objective is to have lowered that percentage to 16. Similarly, *HP2010* seeks to increase to 50% the proportion of adults with high blood pressure whose blood pressure is under control. As shown in Figure 28, *HP2010* seeks to reduce the number of deaths due to stroke to 48 deaths per 100,000.

^{****} *Preventable Hospitalizations* are hospitalizations for conditions where timely and effective ambulatory care can decrease hospitalizations by preventing the onset of an illness or condition, controlling an acute episode of an illness or managing a chronic disease or condition.